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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,934	02/07/2002	Markus Walther	9432-000151	9849

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EXAMINER

YOUNG, DONALD G

ART UNIT	PAPER NUMBER
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2626

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/071,934		WALTHER, MARKUS	
	Examiner		Art Unit	
	Donald Young		2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Amendment

1. In response to the Office Action mailed September 22, 2005, applicant submitted an amendment filed on December 08, 2005, in which the applicant amended and requested reconsideration with respect to claims 1-19.

Response to Arguments

2. Applicant's arguments filed December 08, 2005 have been fully considered but they are not persuasive.

3. Regarding claims 1 and 11, Applicant argues that Hsu et al. (hereinafter Hsu) fails to teach, suggest or even motivate the limitation of segmenting an input stream into predefined tokens based on pattern information contained in a context record that has been generated in association with tokens of the input stream (Amendment, pg. 7). The Examiner however disagrees.

4. Although Hsu teaches dividing the input text sequence into "tokens" before being sent to the information extractor, Examiner contends this is only for the purpose of indicating the location of each token. In paragraphs 43-45, Hsu expressly teaches the information extractor extracts information such that tokens are grouped together having the same or similar characteristics. The set of consecutive tokens possessing the same characteristics or "attributes" ultimately form a subset of the input token sequence.

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With multiple attributes for the information extractor to account for, the input token sequence now is partitioned into a sequence of pattern information attribute subset tokens (e.g. U, N, A, M in paragraph 42).

5. With respect to claims 7 and 17, Applicant argues that while reference Reps teaches a linear time operating constraint, Reps does not teach, suggest or motivate the segmenting an input stream into predefined tokens based on pattern information contained in a context record that has been generated in association with tokens of the input stream (pg. 9). The Examiner contends while it is true Reps does not teach this, it was not cited for that purpose, for Hsu explicitly teaches these limitations as indicated above. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). So the rejection stands.

6. With respect to claims 8 and 18, Applicant argues that while reference Periera et al. (hereinafter Periera) teaches a text to speech apparatus wherein the information from the partitioning influences the pronunciation of the text string, Periera does not teach, suggest or motivate the segmenting an input stream into predefined tokens based on pattern information contained in a context record that has been generated in association with tokens of the input stream (pg. 10-11). The Examiner contends while it is true Periera does not teach this, it was not cited for that purpose, for Hsu

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explicitly teaches these limitations as indicated above. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). So the rejection stands.

7. With respect to claims 9, 10 and 19, Applicant argues that while reference Corston-Oliver et al. (US/20020138248...hereinafter Corston) teaches a message parser coupled to a linguistic analyzer, wherein an input message contains Japanese text that inherently lacks word space, Corston does not teach, suggest or motivate the segmenting an input stream into predefined tokens based on pattern information contained in a context record that has been generated in association with tokens of the input stream (pg. 12). The Examiner contends while it is true Corston does not teach segmenting an input stream into predefined tokens, it was not cited for that purpose, for Hsu explicitly teaches these limitations as indicated above. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The rejection stands, and thus all pending claims stay rejected, for the reasons given in the previous Office Action, repeated next.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 1-6 and 11-16** are rejected under 35 U.S.C. 102(b) as being anticipated by Hsu et al. (EP 1072986 A2).

Regarding claim 1, Hsu et al. disclose a context-aware tokenizer comprising:

- at least one context automaton module that generates a context record (contextual rules) associated with tokens of an input data stream (text sequence) (Fig. 15(a), 15(c) and paragraph [77 through 82]);
- a tokenizing automaton module having a token automaton (information extractor) that partitions (divide) said input data stream (text sequence) into predefined tokens based on pattern information contained in said token automaton and simultaneously verifying (comparing) contextual appropriateness based on said context record (paragraph [42 through 45]).

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Regarding claim 2, Hsu et al. disclose a context-aware tokenizer wherein:

- said context automaton module comprises a left context automaton that populates (generate) said context record based on identified patterns that precede a given token and a right context automaton that populates (generate) said context record (contextual rules) based on identified patterns that follow said given token (Fig. 15(a), Fig. 15(c) and paragraph [77 through 82]).

Regarding claim 3, Hsu et al. disclose a context-aware tokenizer wherein:

- tokenizing automaton module maintains a data store of predefined token classes (token type) (Fig. 4 and paragraph [53]);
- assigns each token identified to at least one of said predefined token classes (paragraph [49 through 51]).

Regarding claim 4, Hsu et al. disclose a context-aware tokenizer wherein:

- tokenizer reports information indicative of the position and class membership of tokens identified (The reference teaches that Fig. 5 is the text sequence segmented into tokens using the token types listed in Fig. 4.) (Fig. 5 and paragraph [54 through 55]).

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Regarding claim 5, Hsu et al. disclose a context-aware tokenizer wherein:

- tokenizing automaton defines a failure state (incorrect matches), and wherein said tokenizing automaton module monitors the occurrence of said failure state to maintain a record of the longest match (longest match corresponds to pattern results for the largest number value for $(p-n)/(p+n)$) found involving said failure state to detect a default token (broader token class) in the absence of any matching patterns taken from said context automaton module (Fig. 17(a), Fig. 18 element 1810 and paragraph [83 through 87]).

Regarding claim 6, Hsu et al. disclose a context-aware tokenizer wherein:

- context automaton scans (reading) said input data stream (text sequence) in a left-to-right direction to acquire left context information and in a right-to-left direction to acquire right context information (paragraph [44 through 46]).

Regarding claim 11, claim 11 recites the same or similar limitation as claim 1 above, and so is rejected for the same reasons.

Regarding claim 12, claim 12 recites the same or similar limitation as claim 2 above, and so is rejected for the same reasons.

Regarding claim 13, claim 13 recites the same or similar limitation as claim 3 above, and so is rejected for the same reasons.

Regarding claim 14, claim 14 recites the same or similar limitation as claim 4 above, and so is rejected for the same reasons.

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Regarding claim 15, claim 15 recites the same or similar limitation as claim 5 above, and so is rejected for the same reasons.

Regarding claim 16, claim 16 recites the same or similar limitation as claim 6 above, and so is rejected for the same reasons.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 7 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. as applied to claims 1 above, and in view of Reps (ACM 1998).

Regarding claims 7 and 17, Hsu et al. fail to teach of a tokenizer wherein said context automaton and tokenizing automaton collectively obey a linear time operating constraint. However, Reps does teach of a context automaton and tokenizing automaton that collectively obeying a linear time operating constraint (page 263 and 267). Therefore, it would have been obvious for one of ordinary skill in the art at the time of applicant's invention to supplement Hsu et al.'s tokenizer with Reps linear time operating constraint to allow for reduction of storage utilization, as taught by Reps (page 267).

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12. Claims 8 and 18 (formerly claim 19) are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. as applied to claim 1 above, and in view of Pereira et al. (USPN 5,781,884).

Regarding claim 8 and 18, Hsu et al. teach of an input data stream characterized as a text string partitioned to include token class membership information. Hsu et al. lack disclosing a text-to-speech wherein the information from the partition influences the pronunciation of the text string. However, Pereira et al. does teach of a text-to-speech synthesizer (TTS system) wherein information from said partitioned text string influences the pronunciation of said text string (col. 4, line 10 through col. 5, line 4 and col. 6, lines 20-35). Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to supplement Hsu et al.'s tokenizer with Pereira et al. text-to-speech synthesizer to allow for a multilingual system that is capable of handling a wide range of languages including Chinese or Japanese, as taught by Pereira et al. (col., lines 20-23).

13. Claims 9, 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. as applied to claim 1 above, in view of Corston-Oliver et al. (US 20020138248)

Regarding claim 9 and 10, Hsu et al. fail to teach of a text processor coupled to a tokenizing automaton. However, Corston-Oliver et al. does teach of a tokenizing automaton (message parser)(Fig. 2, element 204) coupled to said text processor (linguistic analyzer) (Fig. 2, element 206) wherein input data stream (message) comprises

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text that lacks word unit separation symbols (Japanese) (It is well known that Japanese text does not contain word space indicators as is found in European or Romance languages). Corston-Oliver et al. also teaches said text processor operating upon said text to identify and label multi-word phrases/units for single unit treatment (Fig. 4, element 224 and paragraph [50 and 88]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to supplement Hsu et al.'s tokenizer with Corston-Oliver et al.'s text processor to allow for text to be compressed and more easily displayed on small screens in a linguistically intelligent manner, as taught by Corston-Oliver et al. (paragraph [1]).

Regarding claim 19, Hsu et al. fail to teach of generating tokenization information about input stream (message) that includes class membership (meaning, part-of-speech) of predefined tokens (pronoun, verb etc.) and supplying tokenization information to a text processor. However, Corston-Oliver et al. does teach of generating tokenization information about input stream that includes class membership of predefined tokens and supplying tokenization information to a text processor (linguistic analyzer) (Fig. 2, element 206) (Fig. 4, element 222, element 224 and paragraphs [25-27 and 35-45]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to supplement Hsu et al.'s method for tokenizing with Corston-Oliver et al.'s method for supplying tokenization information to a text processor to allow for text to be compressed and more easily displayed on small screens in a

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linguistically intelligent manner, as taught by Corston-Oliver et al. (paragraph [1]).

Conclusion

14. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Young whose telephone number is (571) 272-8134. The examiner can normally be reached on 8:30 a.m. to 5:00 p.m..

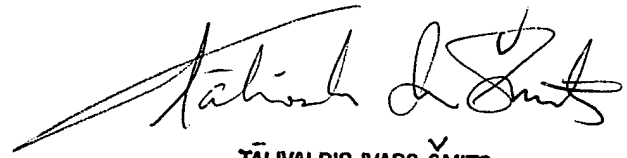
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Smits can be reached on (571) 272-7628. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DGY

03/17/2006



TĀLIVALDIS IVARS ŠMITS
PRIMARY EXAMINER